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SEARCH REQUEST FORM

MEJ

Requester's Full Name: Jeffrey E. Russell Examiner #: 62785 Date: June 9, 2005  
 Art Unit: 1654 Phone Number: 2-0769 Serial Number: 10/671,340  
 Location (Bldg/Room#): REM 3D19 (Mailbox #): 3C18 Results Format Preferred (circle): PAPER DISK

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To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Modified GLP-1 Peptides With Increased Biological Potency

Inventors (please provide full names): D. Gravel, K. Perl, T. Abribat, A. Habi

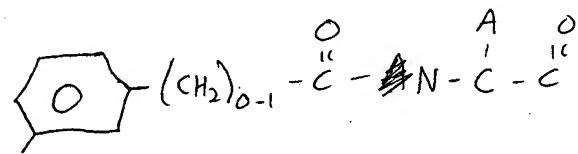
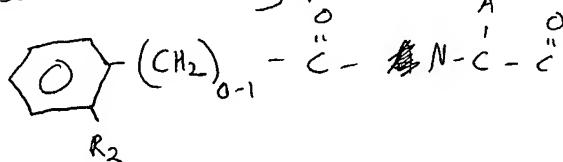
Earliest Priority Date: 9-25-2003

## Search Topic:

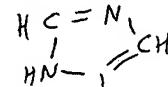
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search the following partial structures



where ~~R2~~ R<sub>2</sub> and R<sub>3</sub> are OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OH, NH<sub>2</sub>, -NH-C(=O)-, or halogen.



Please narrow any hits by requiring A to be

or by using the keywords GLP-1 / glucagon-like peptide-1.

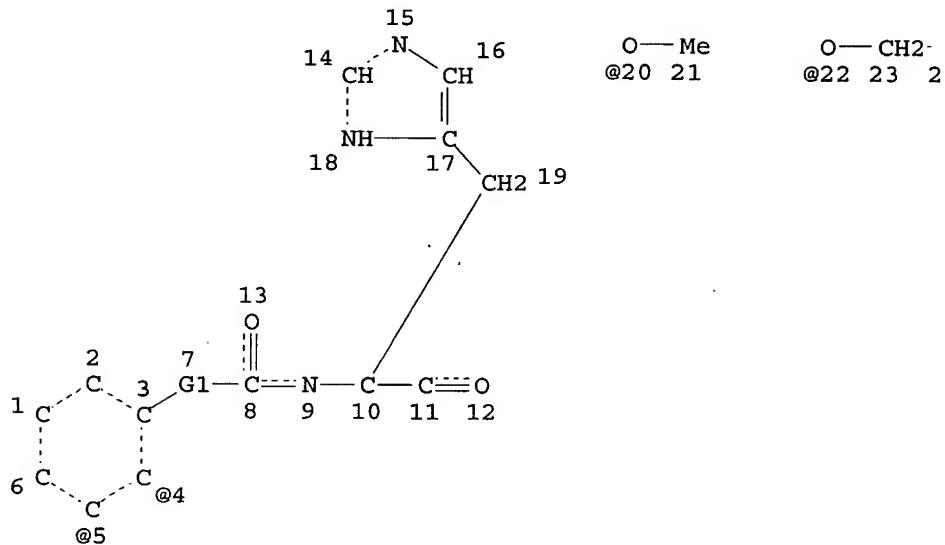
Thank you *[Signature]*

STAFF USE ONLY		Type of Search	Vendors and cost where applicable	
Searcher:		NA Sequence (#)	STN	Dialog
Searcher Phone #:		AA Sequence (#)	Questel/Orbit	Lexis/Nexis
Searcher Location:		Structure (#)	Westlaw	WWW/Internet
Date Searcher Picked Up:		Bibliographic	In-house sequence systems	
Date Completed:		Litigation	Commercial	Oligomer
Searcher Prep & Review Time:		Fulltext	Interference	SPDI
Online Time:		Other	Score/Length Encode/Transl Other (specify)	

Russel  
101671340

Page 1

=> d 13 que stat;fil medl,biosis,embase,caplus;s 13  
L1 STR



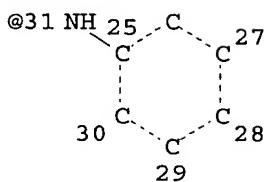
G2 @32

26

Page 1-A

Me  
4

Page 1-B



Page 2-A

REP G1=(0-1) CH<sub>2</sub>  
VAR G2=20/22/OH/NH2/31  
VPA 32-4/5 U  
NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 32

STEREO ATTRIBUTES: NONE

L3 46 SEA FILE=REGISTRY SSS FUL L1

Page 2

100.0% PROCESSED 83477 ITERATIONS  
SEARCH TIME: 00.00.02

46 ANSWERS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	163.91	164.12

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L4 0 FILE MEDLINE  
L5 0 FILE BIOSIS  
L6 0 FILE EMBASE  
L7 33 FILE CAPLUS

TOTAL FOR ALL FILES  
L8 33 L3

=> fil caplus;s 18 and (glp1 or (glucagon like peptide(w) 1))  
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION  
FULL ESTIMATED COST 5.76 169.88

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FILE COVERS 1907 - 22 Jun 2005 VOL 142 ISS 26  
FILE LAST UPDATED: 21 Jun 2005 (20050621/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

Prepared by: Mary Hale @2-2507 Rem Bldg 1D86

701 GLP1  
23851 GLUCAGON  
103 GLUCAGONS  
23864 GLUCAGON  
(GLUCAGON OR GLUCAGONS)  
672456 LIKE  
252 LIKES  
672671 LIKE  
(LIKE OR LIKES)  
331383 PEPTIDE  
242343 PEPTIDES  
424312 PEPTIDE  
(PEPTIDE OR PEPTIDES)  
2541 GLUCAGON LIKE PEPTIDE  
(GLUCAGON(W) LIKE(W) PEPTIDE)  
8306103 1  
1796 GLUCAGON LIKE PEPTIDE(W) 1  
L9 1 L7 AND (GLP1 OR (GLUCAGON LIKE PEPTIDE(W) 1))

=> d ibib abs hitstr

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004-287858 CAPLUS  
 DOCUMENT NUMBER: 140-298100

TITLE: Modified GLP-1 peptides with increased biol. potency  
 in the treatment of glucose metabolism disorders,  
 insulin resistance, and related conditions  
 INVENTOR(S): Gravel, Denis; Peri, Krishna; Abribat, Thierry; Habi,  
 Abdelkrim  
 PATENT ASSIGNEE(S): Theratechnologies Inc., Can.  
 SOURCE: PCT Int. Appl., 47 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004029081	A2	20040408	WO 2003-CM1470	20030925
WO 2004029081	A3	20040722		
W: AE, AG, AL, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IV, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TZ, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CL, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004127412	A1	20040701	US 2003-671340	20030925
PRIORITY APPLN. INFO.:			US 2002-413171P	P 20020925

OTHER SOURCE(S): MARPAT 140:298100

AB The present invention relates to a GLP-1 peptide having the following formula, or a pharmaceutically acceptable salt thereof:

X-His-Ala-Glu-Gly-Thr-Ser-Asp-Val-Ser-Ser-Tyr-Leu-Glu-Gly-Gln-Ala-Ala-Lys-Glu-Phe-Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-Y (SEQ ID NO.1), wherein

X is a rigidizing hydrophobic moiety and wherein Y is selected from the group consisting of OH, NH<sub>2</sub> and Gly-OH. Moreover, the present invention relates to pharmaceutical compns. comprising a therapeutically effective amount of a peptide of the present invention, or a pharmaceutically acceptable salt thereof, in association with at least one constituent selected

from a pharmaceutically acceptable carrier, diluent, and excipient.

IT 676471-19-5 676471-20-6 676471-22-0  
 676471-23-1 676471-25-3 676471-26-4  
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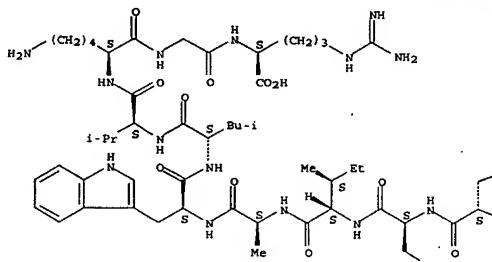
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (modified GLP-1 peptides with increased biol. potency in the treatment of glucose metabolism disorders, insulin resistance, and related

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 676471-19-5 CAPLUS  
 CN 1-L-Arginine, N-(2-ethoxybenzoyl)-L-histidyl-L-alanyl-L- $\alpha$ -glutamylglycyl-L-threonyl-L-phenylalananyl-L-threonyl-L-seryl-L- $\alpha$ -aspartyl-L-valyl-L-seryl-L-seryl-L-tyrosyl-L-leucyl-L- $\alpha$ -glutamyl-L-lysylglycyl (SCI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

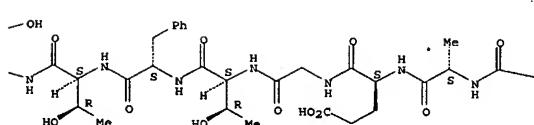
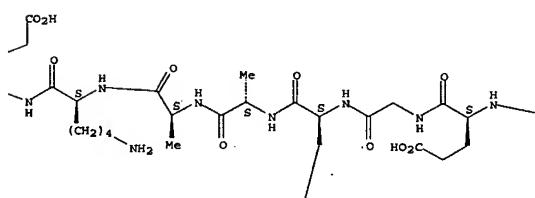


L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-B

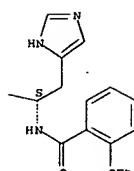
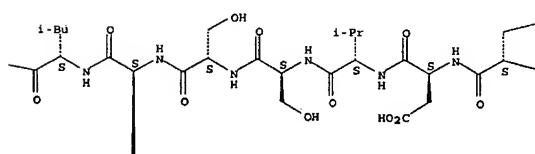
L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

PAGE 1-D



PAGE 1-E

PAGE 1-C



Page 17

=> s gravel d?/au;s peri k?/au;s abribat t?/au;s habi a?/au  
L10 108 GRAVEL D?/AU

L11 55 PERI K?/AU

L12 38 ABRIBAT T?/AU

L13 13 HABI A?/AU

=> s l1 and l11 and l12 andl13

REGISTRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...  
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 11:23:19

SAMPLE SCREEN SEARCH COMPLETED - 4057 TO ITERATE

24.6% PROCESSED 1000 ITERATIONS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 77321 TO 84959

PROJECTED ANSWERS: 0 TO 0

L14 0 SEA SSS SAM L1

L15 0 L14

MISSING OPERATOR L12 ANDL13

The search profile that was entered contains terms or  
nested terms that are not separated by a logical operator.

=> s l10 and l11 and l12 andl13

MISSING OPERATOR L12 ANDL13

The search profile that was entered contains terms or  
nested terms that are not separated by a logical operator.

=> s l10 and l11 and l12 and l13

L16 1 L10 AND L11 AND L12 AND L13

=> d ibib abs

L16 ANSWER 1 OF 1 CAPIUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:287858 CAPIUS  
DOCUMENT NUMBER: 140:298100  
TITLE: Modified GLP-1 peptides with increased biol. potency  
in the treatment of glucose metabolism disorders,  
insulin resistance, and related conditions  
INVENTOR(S): Gravel, Denis; Pari, Krishna;  
Abribat, Thierry; Habi, Abdelkrim  
PATENT ASSIGNEE(S): Theratechnologies Inc., Can.  
SOURCE: PCT Int. Appl. 47 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2004029081	A2	20040408	WO 2003-CAL1470	20030925
WO 2004029081	A3	20040722		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG				
US 2004127412	A1	20040701	US 2003-671340	20030925
PRIORITY APPLN. INFO.:			US 2002-413171P	P 20020925

OTHER SOURCE(S): MARPAT 140:298100  
AB The present invention relates to a GLP-1 peptide having the following  
formula, or a pharmaceutically acceptable salt thereof:  
X-His-Ala-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Val-Ser-Ser-Tyr-Leu-Glu-Gly-Gln-Ala-  
Ala-Lys-Glu-Phe-Ile-Ala-Trp-Leu-Val-Lys-Gly-Arg-Y (SEQ ID NO.1), wherein  
X is a rigidifying hydrophobic moiety and wherein Y is selected from the  
group consisting of OH, NH2 and Gly-OH. Moreover, the present invention  
relates to pharmaceutical compns. comprising a therapeutically effective  
amount of a peptide of the present invention, or a pharmaceutically  
acceptable salt thereof, in association with at least one constituent  
selected  
from a pharmaceutically acceptable carrier, diluent, and excipient.

=> fil medl,biosis,embase;s 116		
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	3.10	198.51
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.73	-1.46

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L17 0 FILE MEDLINE  
L18 0 FILE BIOSIS  
L19 0 FILE EMBASE

TOTAL FOR ALL FILES  
L20 0 L16

=> s (glp1 or (glucagon like peptide(w) 1))  
L21 1645 FILE MEDLINE  
L22 2143 FILE BIOSIS  
L23 1982 FILE EMBASE

TOTAL FOR ALL FILES  
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L25 0 FILE MEDLINE  
L26 0 FILE BIOSIS  
L27 0 FILE EMBASE

TOTAL FOR ALL FILES  
L28 0 (L10 AND L11 AND L12 AND L13) AND L24

=> del his y

=> fil reg		
COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.55	201.06
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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STRUCTURE FILE UPDATES: 21 JUN 2005 HIGHEST RN 852656-52-1  
DICTIONARY FILE UPDATES: 21 JUN 2005 HIGHEST RN 852656-52-1

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\*  
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\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>